

**CLAIMS:**

What is claimed is:

1     1.    A method of registering services in a taxonomy, comprising:  
2            receiving a registration request, the registration request  
3     including a service description and an identification of a  
4     category within the taxonomy in which the service is to be  
5     registered;

6            determining if the service description should be registered  
7     in the identified category based on a canonical service  
8     description associated with the category; and

9            registering the service description in the identified  
10    category if the determination is that the service description  
11    should be registered in the identified category.

1     2.    The method of claim 1, wherein the canonical service  
2     description identifies minimum criteria for the category.

1     3.    The method of claim 1, wherein registering the service  
2     description in the category includes storing the service  
3     description and an associated model description in a storage in  
4     association with the category.

5     4.    The method of claim 1, wherein the method is implemented in  
6     a service broker within at least one network.

1     5.    The method of claim 1, wherein if it is determined that the  
2     service description should not be registered in the category, a  
3     determination is made as to whether a request to add a new  
4     category is received.

1     6.    The method of claim 5, wherein if a request to add a new

category is received, a determination is made as to whether to add the new category, and wherein if the new category is added, the service description is registered in association with the new category.

7. The method of claim 1, wherein the canonical service description includes information identifying minimum requirements of the category regarding one or more of security requirements, privacy requirements and communication protocol requirements.

8. The method of claim 1, wherein if it is determined that the service description should not be registered in the category, the method further comprises:

searching the taxonomy for an alternate category in which the service description should be registered; and

registering the service description in the alternate category.

9. The method of claim 8, wherein searching the taxonomy for an alternate category includes searching one or more of sibling, parent and child categories of the identified category within a predetermined range of the identified category in the taxonomy.

10. The method of claim 8, wherein searching the taxonomy for an alternate category includes searching the taxonomy for a category in which the service description meets requirements of a canonical service description associated with the alternate category.

11. A computer program product in a computer readable medium for registering services in a taxonomy, comprising:

first instructions for receiving a registration request, the

4 registration request including a service description and an  
5 identification of a category within the taxonomy in which the  
6 service is to be registered;

7 second instructions for determining if the service  
8 description should be registered in the identified category based  
9 on a canonical service description associated with the category;  
10 and

11 third instructions for registering the service description  
12 in the identified category if the determination is that the  
13 service description should be registered in the identified  
14 category.

1 12. The computer program product of claim 11, wherein the  
2 canonical service description identifies minimum criteria for the  
3 category.

1 13. The computer program product of claim 11, wherein the third  
2 instructions for registering the service description in the  
3 category includes instructions for storing the service  
4 description and an associated model description in a storage in  
5 association with the category.

1 14. The computer program product of claim 11, wherein the  
2 computer program product is executed in a service broker within  
3 at least one network.

1 15. The computer program product of claim 11, further comprising  
2 fourth instructions for determining whether a request to add a  
3 new category is received, if it is determined that the service  
4 description should not be registered in the category.

1 16. The computer program product of claim 15, further comprising

fifth instructions for determining whether to add the new category, if a request to add a new category is received, and sixth instructions for registering the service description in association with the new category, if the new category is added.

17. The computer program product of claim 11, wherein the canonical service description includes information identifying minimum requirements of the category regarding one or more of security requirements, privacy requirements and communication protocol requirements.

18. The computer program product of claim 11, further comprising:

fourth instructions for searching the taxonomy for an alternate category in which the service description should be registered if the result of execution of the second instructions is that the service description should not be registered in the category; and

fifth instructions for registering the service description in the alternate category if an alternate category is identified by execution of the fourth instructions.

19. The computer program product of claim 18, wherein the fourth instructions for searching the taxonomy for an alternate category includes instructions for searching one or more of sibling, parent and child categories of the identified category within a predetermined range of the identified category in the taxonomy.

20. The computer program product of claim 18, wherein the fourth instructions for searching the taxonomy for an alternate category includes instructions for searching the taxonomy for a category in which the service description meets requirements of a

5 canonical service description associated with the alternate  
6 category.

1 21. An apparatus for registering services in a taxonomy,  
2 comprising:

3 means for receiving a registration request, the registration  
4 request including a service description and an identification of  
5 a category within the taxonomy in which the service is to be  
6 registered;

7 means for determining if the service description should be  
8 registered in the identified category based on a canonical  
9 service description associated with the category; and

10 means for registering the service description in the  
11 identified category if the determination is that the service  
12 description should be registered in the identified category.

1 22. The apparatus of claim 21, wherein the canonical service  
2 description identifies minimum criteria for the category.

1 23. The apparatus of claim 21, wherein the means for registering  
2 the service description in the category includes means for  
3 storing the service description and an associated model  
4 description in a storage in association with the category.

1 24. The apparatus of claim 21, wherein the apparatus is part of  
2 a service broker within at least one network.

1 25. The apparatus of claim 21, further comprising means for  
2 determining whether a request to add a new category is received  
3 if it is determined that the service description should not be  
4 registered in the category.

1 26. The apparatus of claim 25, further comprising means for  
2 determining whether to add the new category, if a request to add  
3 a new category is received, and means for registering the service  
4 description in association with the new category, if the new  
5 category is added.

1 27. The apparatus of claim 21, wherein the canonical service  
2 description includes information identifying minimum requirements  
3 of the category regarding one or more of security requirements,  
4 privacy requirements and communication protocol requirements.

1 28. The apparatus of claim 21, further comprising:  
2 means for searching the taxonomy for an alternate category  
3 in which the service description should be registered if the  
4 means for determining indicates that the service description  
5 should not be registered in the category; and  
6 means for registering the service description in the  
7 alternate category if an alternate category is identified by the  
8 means for searching.

1 29. The apparatus of claim 28, wherein the means for searching  
2 the taxonomy for an alternate category includes means for  
3 searching one or more of sibling, parent and child categories of  
4 the identified category within a predetermined range of the  
5 identified category in the taxonomy.

1 30. The apparatus of claim 28, wherein the means for searching  
2 the taxonomy for an alternate category includes means for  
3 searching the taxonomy for a category in which the service  
4 description meets requirements of a canonical service description  
5 associated with the alternate category.